

Name:

Date:

/50

%

PART A In the space on the left, write the letter of the term or phrase which **best** completes the statement or answers the question (1 mark each).

- _____ 1. Most of the energy from the Sun that is trapped by plants is ...
a. passed to the producers.
b. passed to the consumers.
c. passed to the detritivores.
d. lost from the ecosystem.
- _____ 2. Which of the following is not a biome found in Canada?
a. tropical rainforest
b. desert
c. boreal forest
d. tundra
- _____ 3. Elevation has an effect on ...
a. temperature
b. plant species
c. animal species
d. all of the above
- _____ 4. Short term stores of carbon are found ...
a. both on land and in the upper parts of the ocean.
b. on land.
c. in the upper parts of the ocean.
d. in the atmosphere
- _____ 5. During photosynthesis, carbon dioxide plus water will produce how much sugar and oxygen?
a. 3 molecules of oxygen and one molecule of sugar
b. 3 molecules of sugar and one molecule of oxygen
c. 6 molecules of oxygen and one molecule of sugar
d. 6 molecules of sugar and one molecule of oxygen
- _____ 6. The farther north or south of the equator you are, ...
a. the more direct the sunlight is
b. the warmer the temperature
c. both A and B
d. Neither A nor B

- ___ 7. The essential element in the molecule that carries energy to plant and animal cells is ...
a. nitrogen
b. phosphorous
c. carbon
d. oxygen
- ___ 8. How do changes in the nutrient cycles affect biodiversity?
a. an excess or lack of nutrients can affect the biotic and abiotic conditions.
b. an excess or lack of nutrients can affect the biotic conditions.
c. an excess or lack of nutrients can affect the abiotic conditions.
d. changes in the nutrient cycles do not affect the biodiversity.
- ___ 9. A species that naturally inhabits an area is called a ...
a. foreign species
b. native species
c. pioneer species
d. climax species
- ___ 10. Photosynthesis requires ...
a. oxygen and nitrogen
b. carbon dioxide, oxygen, and water
c. carbon dioxide, sunlight, and water
d. none of the above

PART B In the space provided mark each of the following as true or false. (1 mark each)

- ___ 1. All living things contain carbon atoms in their cells.
- ___ 2. Most phosphate in run-off settles on lake and ocean bottoms forming sedimentary rock.
- ___ 3. The use of fossil fuels contributes carbon to the atmosphere.
- ___ 4. Inorganic compounds all contain carbon.
- ___ 5. Nitrogen is an important component of proteins.
- ___ 6. The tundra biome is located in the southern hemisphere.
- ___ 7. Phosphate is stored in the atmosphere and returned to Earth in rain water.
- ___ 8. The adaptation of two species in response to each other is called coevolution.
- ___ 9. About 78% of the Earth's atmosphere is oxygen.
- ___ 10. Animals in deserts often have large ears to increase heat loss.

PART C In the space provided, match each term or phrase with the best definition. (1 mark each)

- | | |
|-------------------------------|---|
| ___ 1. Biome | A. Process in which rock is broken down into smaller fragments. |
| ___ 2. Sedimentation | B. The biome with the greatest biodiversity. |
| ___ 3. Desert | C. Respiration that does not use oxygen to release energy. |
| ___ 4. Tropical rainforest | D. The gradual change of organisms in an area over time. |
| ___ 5. Grassland | E. Process in which soil and decaying organisms accumulate in layers. |
| ___ 6. Polar ice | F. Tropical versions of this biome are called savannas. |
| ___ 7. Fermentation | G. When a species resembles another that is poisonous or dangerous. |
| ___ 8. Mimicry | H. A large ecosystem with a specific range of biotic and abiotic factors. |
| ___ 9. Weathering | I. A biome where no specific plant growth exists. |
| ___ 10. Ecological succession | J. A biome that contains water-preserving plants like cacti. |

PART D Each of the following questions requires a short answer.

1. How do plants not living in association with nitrogen-fixing bacteria obtain nitrogen? (5 marks)

2. What effect does burning fossil fuels have on the carbon cycle? (4 marks)

3. Name and describe the location, climate, physical features, and the plant and animal adaptations of ***either*** the temperate rainforest or temperate grassland biomes found in Canada. (5 marks)

4. How does precipitation change with latitude? (6 marks)

5. Give a concise definition of a *biome*. (3 marks)

6. Describe the process of photosynthesis. (5 marks)

7. Name two types of weathering. (2 marks)